

## ChartMaker® Medical Suite API

### Getting Started

To use the ChartMaker® Medical Suite API, a SOAP service client needs to be created. The ChartMaker® Medical Suite API service is located at <https://chartmakerpatientportal.com:8080/APIService.svc>. Connecting to the URL will provide the SOAP service client implementation instructions. TLS is required to connect to the ChartMaker® Medical Suite API service.

### Authentication

Most the ChartMaker® Medical Suite API services methods requires the user to be logged in with a sessionKey. You'll first make a call to the Authenticate service method, which will return sessionInfo containing the sessionKey. You'll then pass that sessionKey to the rest of the service methods as a parameter.

Here is the Authenticate service method definition:

**bool** Authenticate(**string** authorizationCode, **string** applicationName, **string** applicationURL, **out string** sessionInfo)

- The authorizationCode is a unique identifier generated for each patient in CHARTMAKER® MEDICAL SUITE. Your end user(s) would be provided their authorizationCode from their practice.
- Your application's name and company's URL need to be provided in the applicationName and applicationURL parameters respectively.
- This method will return true if successful, and sessionInfo will contain the sessionKey. It will return false if unsuccessful, and sessionInfo will contain error information. Detailed sessionInfo details can be found under the Response Details section below.

### Requesting Patient Data

After successfully authenticating, you can then call any of the patient data requests below. All PatientData() requests will output a CCDa document that you can parse for specific patient data. DataCategory() requests will return only the selected category in an XML format but will not return a complete CCDa document. We do not recommend using the DataCategory() methods.

**bool** RequestAllPatientData(**string** sessionKey, **out string** results)

- The sessionKey is the session GUID (key) returned from a successful Authenticate() call.
- This method will return true if successful, and results will contain a complete CCDa document with all Common Clinical Data Set sections. It will return false if unsuccessful, and results will contain an error response. The possible error responses can be found under the Response Details section.
- The CCDa returned by this method are not filtered and contain all patient data.

**bool** RequestAllPatientDataWithDateRange(**string** sessionKey, **DateTime** startDate, **DateTime** endDate, **out string** results)

- The sessionKey is the session GUID (key) returned from a successful Authenticate() call.
- The startDate filters out any patient data occurring before this date.
- The endDate filters out any patient data occurring after this date.
- This method will return true if successful, and results will contain a filtered CCDa document with any Common Clinical Data Set sections that apply. It will return false if unsuccessful, and results will contain an error response. The possible error responses can be found under the Response Details section.
- The CCDa returned by this method will only include data that was performed during or was active during the date range specified along with all demographic and CCDa header information.

- The following sections and entries will not be included when a date range is used: Assessments, Chief Complaint, Payers, Educational Material, Recalls, Instructions, Reason for Referral, History of Tobacco Use, and Birth Sex.

**bool** RequestPatientData([string](#) sessionKey, [PatientDataSections](#) sectionFlags, [out string](#) results)

- The sessionKey is the session GUID (key) returned from a successful Authenticate() call.
- The sectionFlags parameter (optional) is used to filter what Common Clinical Data Set sections are populated in the results CCDAs document.

Here is an example of passing in the sectionFlags parameter in C#:

```
RequestPatientData("ABCD1234", PatientDataSections.Procedure | PatientDataSections.Assessment | PatientDataSections.MentalStatus, results)
```

Here's the list of available [PatientDataSections](#):

- Procedure, Vitals, Immunization, SocialHistory, ReasonForReferral, FunctionalStatus, MentalStatus, MedicalEquipment, Assessment, Goals, HealthConcerns, PlanOfTreatment, Payer, Encounter, ChiefComplaint, MedicationsAdministered.
- This method will return true if successful, and results will contain a filtered CCDAs document with any Common Clinical Data Set sections that apply. It will return false if unsuccessful, and results will contain an error response. The possible error responses can be found under the Response Details section.
- The CCDAs returned by this method will always return demographic and header information, Medications, Allergies, Problems, and Results. All other sections will be filtered to only include the data that is being requested by the sectionFlags parameter.

**bool** RequestPatientDataWithDateRange([string](#) sessionKey, [PatientDataSections](#) sectionFlags, [DateTime](#) startDate, [DateTime](#) endDate, [out string](#) results)

- The sessionKey is the session GUID (key) returned from a successful Authenticate() call.
- The sectionFlags parameter (optional) is used to filter what Common Clinical Data Set sections are populated in the results CCDAs document.

Here is an example of passing in the sectionFlags parameter in C#:

```
RequestPatientDataWithDateRange("ABCD1234", PatientDataSections.Procedure | PatientDataSections.Vitals | PatientDataSections.MentalStatus, new DateTime(2017,1,1), new DateTime(2017,12,31), results)
```

Here's the list of available [PatientDataSections](#):

- Procedure, Vitals, Immunization, SocialHistory, ReasonForReferral, FunctionalStatus, MentalStatus, MedicalEquipment, Assessment, Goals, HealthConcerns, PlanOfTreatment, Payer, Encounter, ChiefComplaint, MedicationsAdministered.
- The startDate filters out any patient data occurring before this date.
- The endDate filters out any patient data occurring after this date.
- This method will return true if successful, and results will contain a filtered CCDAs document with any Common Clinical Data Set sections that apply. It will return false if unsuccessful, and results will contain an error response. The possible error responses can be found under the Response Details section.
- The CCDAs returned by this method will always return demographic and header information, Medications, Allergies, Problems, and Results. All other sections will be filtered to only include the data that is being requested by the sectionFlags parameter.
- The following sections and entries will not be included when a date range is used: Assessments, Chief Complaint, Payers, Educational Material, Recalls, Instructions, Reason for Referral, History of Tobacco Use, and Birth Sex.

**bool** RequestDataCategory([string](#) sessionKey, [DataCategory](#) category [out string](#) results)

- The sessionKey is the session GUID (key) returned from a successful Authenticate() call.
- The category is a single selection of data to be returned.
- This method will return true if successful, and results will contain the selected category in an XML format. It will return false if unsuccessful, and results will contain an error response. The possible error responses can be found under the Response Details section.

Here's the list of available [DataCategory](#) selections:

- PatientDemographics, SmokingStatus, Problems, Medications, Allergies, LabTests, LabResults, VitalSigns, Procedures, CareTeam, Immunizations, ImplantableDevices, Assessments, PlanOfTreatment, Goals, and HealthConcerns.

**bool** RequestPatientDataWithDateRange(**string** sessionKey, **DataCategory** category, **DateTime** startDate, **DateTime** endDate, **out string** results)

- The sessionKey is the session GUID (key) returned from a successful Authenticate() call.
- The category is a single selection of data to be returned.
- The startDate filters out any patient data occurring before this date.
- The endDate filters out any patient data occurring after this date.
- This method will return true if successful, and results will contain the selected category in an XML format. It will return false if unsuccessful, and results will contain an error response. The possible error responses can be found under the Response Details section.

Here's the list of available **DataCategory** selections:

- PatientDemographics, SmokingStatus, Problems, Medications, Allergies, LabTests, LabResults, VitalSigns, Procedures, CareTeam, Immunizations, ImplantableDevices, Assessments, PlanOfTreatment, Goals, and HealthConcerns.

## Response Details

When applicable, a service method will return an XML response containing success or failure information.

Authenticate() success details:

```
<Session>
  <Success>
    <key>[Patient's session key for further requests]</key>
    <expiration>[The date and time of when the session will expire]</expiration>
  </Success>
</Session>
```

Errors returned by any service method will result in the following message:

```
<Session>
  <Error>
    <code>[failure code]</code>
    <details>[error details text]</details>
  </Error>
</Session>
```

Possible failure codes & details:

Code	Details
ApplicationDenied	The calling application has been denied access due to a breach in the terms of service.
ApplicationNameRequired	An application name and URL is required in order to authenticate.
InvalidAuthorizationCode	The authentication code was not found.
PatientAccessDisabled	The patient is no longer registered to use the API service.
SessionExpired	The session information has expired.
InvalidSessionKey	The session key was not found.
NoPatientDataAvailable	The patient is registered but does not currently have patient data to request.
PatientNotFound	Patient information was not found.

RequestDataCategory() and RequestDataCategoryWithDateRange()

When these methods return successfully, the contents will be wrapped in a <Results> element. The contents of the results will vary based on the data category selected.

```
<Results>
  <Patient classCode="PSN" determinerCode="INSTANCE">
```

```

<name use="L" >
  <given>Alice</given>
  <given>Jones</given>
  <family>Newman</family>
</name>
<name >
  <given qualifier="BR">Alicia</given>
  <family>Newman</family>
</name>
<administrativeGenderCode code="F" codeSystem="2.16.840.1.113883.5.1"
displayName="Female" />
<birthTime value="19700501" />
<raceCode code="2106-3" codeSystem="2.16.840.1.113883.6.238" displayName="White" />
<raceCode code="2108-9" codeSystem="2.16.840.1.113883.6.238" displayName="European"
/>
  <ethnicGroupCode code="2186-5" codeSystem="2.16.840.1.113883.6.238" displayName="Not
Hispanic or Latino" />
  <languageCommunication >
    <languageCode code="en" />
    <preferenceInd value="true" />
  </languageCommunication>
</Patient>
</Results>

```